Unit title	Unit 7: Mobile Apps Development
Guided learning hours	60
Number of lessons	30
Duration of lessons	2 hours

Key to learning opportunities			
IA	Internal assessment	**RS**	Revision session
GS	Guest speaker	**V**	Visit
IS	Independent study	**C**	Classroom activities directed by teacher

Lesson	Topic	Lesson type	Suggested activities	Resources
Learning aim A: Investigate mobile apps and mobile devices				
1	**A1 Types of mobile apps**	IS C	• **Teacher-led discussion:** To introduce the unit, initiate a discussion on the different types of mobile apps. • **Teacher presentation:** Give an overview of the different characteristics of mobile apps. • **Individual activity:** Learners to research mobile apps against different categories. • **Plenary:** Summarise the lesson and use oral questioning to confirm learners' understanding.	• Computers. • Teacher presentation on types of mobile apps.
2	**A2 Context of mobile apps**	IS C	• **Teacher-led discussion:** To introduce the context of different mobile apps, e.g. purpose and features. • **Teacher presentation:** Give an overview of the different features and purposes of mobile apps. • **Individual activity:** Learners to research mobile apps against different features and purposes. • **Plenary:** Summarise the lesson and use oral questioning to confirm learners' understanding.	• Computers. • Teacher presentation on features and purposes of mobile apps.

Lesson	Topic	Lesson type	Suggested activities	Resources
3	**A3 Mobile device integration**	IS C	• **Teacher-led discussion:** Discuss the different mobile app platforms. • **Paired/small-group activity:** Learners should research and document the different mobile platforms and what special hardware each one uses. • **Plenary:** Summarise the lesson and use oral questioning to confirm learners' understanding.	• Computers.
4	**A4 Mobile app programming**	IS C	• **Teacher-led discussion:** Discuss the different mobile app programming languages/environments. • **Paired/small-group activity:** Learners should research and document the different mobile app programming languages/environments. • **Plenary:** Summarise the lesson and use oral questioning to confirm learners' understanding.	• Computers.
5-7	**Learning aim A assessment**	IA/IS	• **Lead-in:** Introduce the assessment detailing the main assessment criteria, deadline, and submission criteria. • **Assignment writing:** Using the authorised assignment, learners should complete all the tasks.	• Computers with internet access.

Lesson	Topic	Lesson type	Suggested activities	Resources
				• Authorised assignment.
• Learning aim B: Design a mobile app that utilises device functions				
8	**B1 Analyse requirements for an app**	IS C	• **Teacher presentation/discussion:** Give an overview of mobile computing requirements for an identified solution. • **Paired/small-group activity:** Undertake a simple practical task to research a mobile app based on a scenario and analyse the requirements. Learners to review their analyse with other groups. • **Plenary:** Summarise the lesson and use oral questioning to confirm learners' understanding.	• Learner activity material. • Teacher presentation and notes. • Computers.
9-11	**B2 Designing a mobile app**	IS C	• **Teacher presentation/discussion:** Give an overview of the design documentation required for mobile app development. • **Paired/small-group activity:** Undertake a simple practical task to produce standard design documentation based on a scenario. Learners to review designs with other groups.	• Learner activity material. • Teacher presentation and notes. • Computers.

Lesson	Topic	Lesson type	Suggested activities	Resources
			• **Plenary:** Summarise the lesson and use oral questioning to confirm learners' understanding.	
• **Learning aim C: Develop a mobile app that utilises device functions**				
12	**C1 Content preparation for mobile apps**	IS C	• **Teacher discussion:** Give an overview of the different processing and editing techniques to prepare resources for specific devices. • **Paired/small-group activity:** Undertake a simple practical task to apply processing and editing techniques to resources based on a scenario. Learners to review content with other groups. • **Plenary:** Summarise the lesson and use oral questioning to confirm learners' understanding.	• Computers.
13-14	**C2 Developing a mobile app**	IS C	• **Teacher presentation/discussion:** Presentation and discussion on the different programming constructs used within programming and mobile platform development. • **Individual activity:** The learners use the programming constructs to create simple apps.	• Teacher presentation and notes. • Computers.

Lesson	Topic	Lesson type	Suggested activities	Resources
14-15	**C2 Developing a mobile app**	IS C	• **Teacher-led discussion:** Description and examples of event-driven programming characteristics • **Individual activity:** Learners create a simple app using event driven functionality. Learners should present their app to the whole class. They should be prepared to explain/justify their choices.	• Computers with Integrated Development Environment installed.
16-17	**C2 Developing a mobile app**	IS C	• **Teacher-led discussion:** Description and examples of object-oriented programming characteristics • **Individual activity:** Learners create a simple app using object-oriented functionality. Learners should present their app to the whole class. They should be prepared to explain/justify their choices.	• Computers with Integrated Development Environment installed.
18	**C2 Developing a mobile app**	IS C	• **Teacher presentation:** Discuss different device capabilities and how these can be developed, along with orientation of devices. • **Individual activity:** Learners add device capabilities and orientation to one of their existing apps created in previous lessons.	• Computers with Integrated Development Environment installed.

Lesson	Topic	Lesson type	Suggested activities	Resources
				• Teacher presentation
19	**C2 Developing a mobile app**	IS C	• **Teacher presentation:** Discuss different quality control procedures that can be applied to mobile apps. • **Individual activity:** Learners apply the quality control procedures to one of their existing apps created in previous lessons.	• Teacher presentation. • Computers.
20	**C3 Testing a mobile app**	IS C	• **Teacher presentation:** Explain what testing involves for programs. • **Individual activity:** Give the learners several different scenarios. They must develop and test a solution for each scenario.	• Teacher presentation and notes. • Computers. • Scenarios for use of develop and testing.
21	**C4 Lessons learned from developing a mobile app**	IS C	• **Lead-in:** What makes a good mobile? • **Tutor-led discussion:** Evaluating the strengths and weaknesses of a mobile app.	• Learner mobile apps.

Lesson	Topic	Lesson type	Suggested activities	Resources
			• **Small-group activity:** Learners evaluate mobile apps produced by other learners and identify strengths and weaknesses. • **Tutor-led discussion:** Feedback from the activity, learners discuss their evaluations, common themes identified.	
22-30	**Learning aims B & C assessment**	IA/IS	• **Lead-in:** Introduce the assessment detailing the main assessment criteria, deadline, and submission criteria. • **Assignment writing:** Using the authorised assignment, learners should complete all the tasks.	• Computers with internet access. • Authorised assignment.